

a color power processor for mapping the estimated power magnitude on color values.

8. (previously presented) The ultrasound phased array imaging system of Claim 6, comprising:

a B mode processor for processing the amplitude information of the echo signals, on a spatial basis, for the formation of structural images of the tissue.

9. (previously presented) The ultrasound phased array imaging system of Claim 6, comprising:

a display processor for processing the B mode data, color flow velocity data, color power data, and an image memory for memorizing the image data for display; and

a user control for the user to select the images to display in one mode or in combined modes.

10. (previously presented) An ultrasound imaging method comprising steps of:

acquiring 3-D ultrasound data of a volume of a body, including moving tissue and fluid flow;

emitting and receiving ultrasound beams in said volume, comprising acquiring, in real time and in 3-D, more than one spatial receive beams signals for each transmission beam within an ensemble length of more than two temporal samples, among which the receive flow beam signals and the receive tissue beam signals are substantially temporally uncorrelated but spatially correlated;

separating receive flow Doppler signals means from receive tissue Doppler signals with adaptive spatial tissue filtering, using simultaneously more than one spatial receive beam signals acquired in 3-D within the ensemble length of more than two temporal samples, for analyzing temporal variations of the respective successive receive signals and